New Hampshire ARCHIELT

School Josue 56



OFFICIAL PUBLICATION

New Hampshire Chapter of the American Institute of Architects



DECEMBER 1956

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LAWRENCE J. MOYNIHAN P. O. Box 291 Concord, N. H.

New Hampshire Architect is published onthly at 181 North Main Street, Conrd, N. H., under the direction of the esident and board of directors of the ew Hampshire Chapter, American Initute of Architects, to promote the obctives and public relations of the chaptr. Advertising rates furnished upon quest.

New Hampshire ARCHITECT

VOL. 8

DECEMBER, 1956

NO. 5



IN THIS ISSUE

New Hampshire Architect presents its third annual School Issue, which has been made possible by the cooperation of the architects of New Hampshire Chapter, A. I. A., the general contractors, subcontractors, and last but not least by Paul E. Farnum of the State Board of Education.



COVER PICTURE

Cover Photo By — SWENSON STUDIO, CONCORD, N. H.

The President's Message

For the third time the New Hampshire Chapter of the American Institute of Architects presents an issue devoted to school building construction in New Hampshire. Requests for copies of the two preceding issues have come from many parts of the country due to the widespread interest of what in recent years has become a problem common to almost every American community.

The unit costs accompanying the descriptions of the projects were determined by the method used in the "Costs and Trends System" developed by F. W. Dodge Corporation. It is not intended that the costs presented represent those that would prevail had bids been secured at the time this publication appears. While many factors other than time of bidding affect construction costs it must be emphasized that the latter have risen continuously for years, with special impetus added by last summer's steel situation and, even more, by its related effects. It is reasonable to expect that next year's costs will be even higher than those prevailing now.

New Hampshire communities are in a difficult situation. Borrowing limits of school districts are restricted by statute and are based on real estate valuations. These do not increase as rapidly as do construction costs and child population. Consequently an impasse, already effective in some school districts, is developing which, unless corrected, will make it impossible for some communities to provide adequate additional educational facilities.

Presently available state aid for retiring construction loans relieves local tax burdens but does not raise borrowing limits. This can be effected only by action of the legislature. The only other alternatives seem to be federal aid or state aid in the form of federal or state government underwriting a part of the construction cost. In New Hampshire, if the state is a participant in such a program, this probably means a broader tax base. As availability of either of these alternatives is uncertain, raising communities' borrowing limits seems the simplest and quickest assistance for next year's financing of school buildings.

As most annual school district meetings occur in March, when capital funds are appropriated, legislature action, in order to promote next year's construction, should occur early in the session of the General Court.

Hemen Hwellett

New Hampshire FACES ITS SCHOOL BUILDING PROBLEM

By Paul E. Farnum - State Department of Education

This is the third year that this office, operating with the New Hampshire hapter of American Institute of Archicts, has helped to assemble material on hool buildings for this issue of the New ampshire Architect. It is a very worthhile project, since today we are faced ith a critical housing need in New Hamplire towns and cities, and material of this nd is really appreciated by the school pards and members of building comittees all over the state. There is hardly meeting that I attend on the planning of school building that some one of the roup does not have with him a copy of e December issue.

We are all aware that little was done ring the World War II years in improvg school plant facilities. Consequently, on after 1945 New Hampshire school ards became active in finding solutions r these housing problems. Since so little as done during the period from 1940 -45 most school districts had sufficient rrowing leeway to build the type of cility needed. This was the period when e built schools to house elementary ipils. Old buildings were abandoned and w space was provided for the present pulation and those we could count of e-school age. The following table shows e annual expenditure for new construcon since 1949-50.

1949-50	\$2,960,229.00
1950-51	3,480,920.00
1951-52	3,175,672.00
1952-53	2,733,306.00
1953-54	2,334,786.00
1954-55	4,885,790.00
1955-56	5,550,000.00
stimate	

New and different types of problems ce us now. We are all aware of the ineased cost of labor and materials resulting in a greater cost to the voter. These problems also concern the educator for the increase in the birth rate requires continuation of our building programs and will result in even lesser return for the school building dollar.

I wish again to summarize our school facility problem and then offer what I think may be some ways of meeting this issue.

- 1. Many school districts have reached their borrowing leeway under the provisions of the Municipal Finance Act, namely $4\frac{1}{2}\%$ of the assessed valuation as last equalized. While there will be slight increase in the valuations to provide a little more debt leeway this will still not be sufficient without a change in the limits of the Municipal Finance Act to provide an answer for many communities. We must give careful consideration to amending this legislation giving more borrowing capacity to New Hampshire school districts.
- 2. The major construction problem has now shifted to providing space for secondary school pupils. This type of construction not only requires more space per pupil but the facility itself is more expensive and requires a larger appropriation and bond issue. Many of our elementary schools were completed with from 50 to 65 square feet per pupil, while a well planned secondary school plant must now provide 100 to 115 square feet per student. This is of course due to the many special facilities like the auditorium, gymnasium, library, shops and homemaking areas provided in a secondary school.
- 3. While there is now on our statute books a chapter known as the "Cooperative School Act" for the purpose of providing a logical plan for school districts to join

(Continued on Page 7)

School Planning and Building Handbook

Published by F. W. Dodge Corporation

School Planning and Building Handbook, by N. L. Engelhardt, N. L. Engelhardt, Jr., and Stanton Leggett, published by F. W. Dodge Corporation, New York, is the first complete, practical handbook to deal with every phase of planning and executing school buildings and school building programs. This new work should prove an invaluable aid to the many communities now facing an urgent need for new school facilities.

The authors are partners in the internationally-known educational consulting firm of Engelhardt, Engelhardt, and Leggett, of New York, which has developed and instituted hundreds of long-range school building programs throughout the United States. The knowledge and experience gained from over 35 years of successful practice eminently qualify the authors to prepare this handbook. addition to presenting the results of their own exhaustive research and effort, they have included pertinent material obtained from over 85 other leading authorities. These incude prominent school superintendents and administrators, architects, engineers, and other building specialists. The collective result is one authoritative work which contains every item of basis practical information needed to execute a school building program.

Organized into 40 detailed chapter School Planning and Building Handbord analyzes and systematizes all types elementary, intermediate, and secondar school projects. Site selection, contract preliminary planning, specifications, bid ding, bonds, and costs are a few of the hundreds of topics discussed. Even requisite documents, such as various contracts, legal notices, performance bond etc. are reproduced in their entirety, along with checklists covering each stage operation.

Anyone concerned with planning, of signing, financing, building or equipping today's school buildings will find this wo of positive help. It is a particularly in portant tool for members of boards education, superintendents of school school business managers, architects, contractors, and engineers, since it offer systematic guidance through every specialized problem entailed in school planning and building.

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MANCHESTER, N.

School Building Problem —

(Continued from Page 5)

together to create a larger administrative unit, there is still a real reluctance on the part of the voters and taxpayers toward accepting such a plan. This feeling no loubt is one that has developed over the rears and cannot be overcome easily. Such program is absolutely essential in this tate if we are to provide the type of econdary school plant planned and equiped for providing an education for today's A secondary school should have rom 350 to 500 pupils if it is to be large nough to offer the kinds of courses needd in the future. New Hampshire, as is rue in many states, is burdened with nany small high schools with operating osts from \$250.00 to over \$1,200.00 per upil. The average per pupil expenditure or 1955-56 was \$348.00. A small begining has been made during the past three ears and we are proud of the schools ither completed or under construction in he cooperative districts found around the owns of Durham, Hillsborough and Meredith. Every effort should be made to extend this program in order that larger and more efficient school districts be organized. Architects can be of great assistance in encouraging this type of organization.

- The New Hampshire General Court in 1955 voted its first allotment of state funds for assistance to school districts in financing school construction. An appropriation of \$350,000.00 was made available for the year 1955-56 to help in the payment of debt service. Twenty per cent of the principle payment may now be distributed to any district with outstanding debt in the form of serial notes or bonds. Cooperative schools are given 40% which has resulted in more interest in forming this type of district than previously. The State Board of Education in its budget for 1957-59 is asking for increased funds to continue this program and to keep pace with the new building needs.
- 5. Architects know better than the educator the increased cost in construction

Continued on next page



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PITTSBURGH GLAZING WILL BE FOUND IN MANY NEW HAMPSHIRE SCHOOLS

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Gossler Elementary (Manchester)

St. John's Elementary (Laconia)

Hampton Elementary

Newport Junior High

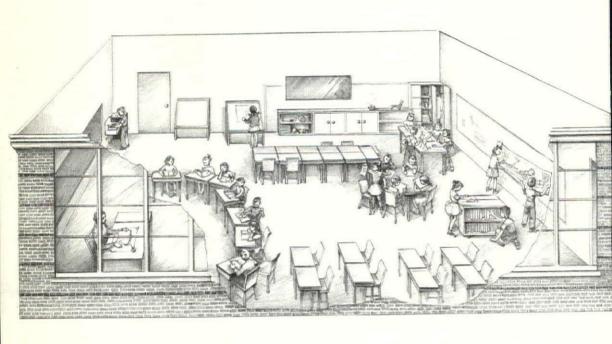
North Conway Elementary

Rumney Elementary

Rye Elementary

7

and its effect on the quality and amount of space now possible for a school plant. School committees insist on large classrooms, multi-purpose rooms, well equipped kitchens and tile toilet rooms, and expect the architect to provide these essentials on a very meager budget. Let's be frank with our committees at the outset and be sure that they understand the situation as it is changing. The elementary school at \$500.00 per pupil and the high school costing \$1,000.00 per student can not be duplicated in 1956, and these facts need to be frankly and clearly made. Our office is equally concerned with the increasing cost of school facilities and has given : considerable amount of time to this pro blem. We feel that the following idea for an elementary school classroom merit We call it a minimun consideration. elementary classroom as is quite obviou from its size and design.



This particular room has 832 square feet of usuable space. While larger rooms are occasionally needed, this number of square feet for 25 to 30 pupils is very satisfactory. Whether the room is square or rectangular in shape is more or less something to be determined by the local school authorities and architect. A shape 26' x 32' seemed to us to be both economical to frame and of a shape suitable to good instruction. This room is sketched to be constructed as a bare classroom without any built in counters, closets, or even storage areas. A bubbler and wash sink or lavoratory, together with a chalk board on the front wall and a tack board in the rear, would complete the built-in features. We would expect, however, that the heating would consist of some type of radiation under the window bank with a suitable foul air exhaust on the opposite side of the room.

The following special features would seem to be economical to provide and giv at the same time a working situation for both pupils and teacher.

a. All pupil furniture, i.e., pupil chair and desks, to be movable and of a styl acceptable to the community. It shoul be light in color to reflect light and hav working surfaces hard to mar and eas to maintain.

Each room to have two types of storage areas. One of the closet type, t replace the built-in storage closet, for general room supplies and the teacher wraps, and the other of counter heigh cabinets of the movable type to be use as a wall storage unit or to be moved t any position in the room where counted work space is needed. These units are be of stock design, usually 48" long ar 18" wide, equipped with gliders for eas

(Continued on Page 32)



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The following members of the New Hampshire Chapter, A. I. A., have submitted photographs, plans, descriptions and costs of schools recently built or under construction at the present time:

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RE: THAT STORE JOB

Dear sur.

This letter is to let you no we ain't figguring on paying none of the liquidateing damages on the job named rite after the "re" on the top of this page. I figgured somethin like this woud happun wen we didnt get the thing done in the 1st place wen it was suposto so i wint their myself to see y not and i dam sure did an it ainnt our fault.

In the 1st place them plans you gave us werent no good and you must of knoed it all the time because somebuddy in your office had to write a hole dam book to try to tell what schuld have been put on them plans in the 1st place. An this guy that rote the book werent any better than the guy that rote the plans in the 1st place. This book was chuck full of stuf about a lot of dam crap probable some relitive of his was sellen and there wasnt anythin in the book about the stuf we used anyway. Then in the front of this book was a bunch of stuf looked like some loyer had stuck in their cause it was in real little print and looked like it was their to screw us.

Be sides all that the man we sent up their to take care of our truck an see that the bilding got bilt said the man you sent up their slowed him down a lot and made him pore truck lode after truck lode of cement in big holes under the bilding that didnt help none and cost a hell of a lot more money than we schuld have spent.

All this stuf caused so much troble our man started to drink and carey on some and when i got their to se about it it teed me off so bad i had to go on a months drunk myself and you ought to be smart enouf to know that you cant get bildings bilt to fast when you got to be drunk all the time.

If you guys had any cents all you had to do was tell us what kind of bilden you wanted and how big and where to put it and we could have got it bilt in about a month or so then this stuf wouldnt had come up and we could all make a wad a dough.

If this aint enough to get the damages stoped let us know. We could start tellen some of the nasty stuf about mistakes in your plans which aint in accord with our ethices but we dont intend to let that stop us if it looks like it will cost us any money.

By the contractor hisself

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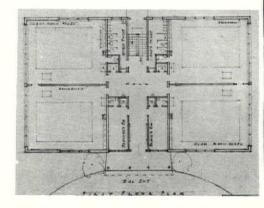


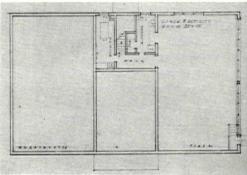
Elementary School for Canterbury School District

DESCRIPTION:

Four class rooms, activity room, kitchen, teacher's room, supply rooms. Structure-concrete footings, reinforced concrete foundation walls to grade; exterior walls brick veneer with 4" cinder block back-up on front and end elevations and rear elevation 8" concrete block painted; 8" and 4" cinder block partitions; ground floor-waterproof concrete on grade; first floor-steel joist, steel tex and 21/2" concrete slab; roof-steel joist with wood nailer, boarding, tar and gravel roofing; galvanized flashing; acoustical fiber tile ceilings; metal doorframes and doors, metal stairs, and steel sash; interior-painted block and trim; asbestos chalkboard, asphalt tile floor; plumbing -6 water closets, 2 urinals, 6 lavatories, 4 class room sinks, 1 fountain, standard supply, septic tank and drain field; heating - oil, forced hot water, fin tube radiation, two zones; ventilationforced exhaust at floor and fresh air intake at windows; electrical-rigid conduit, romex, and incandescent fixtures.

Building constructed by owner with sub contract service and partial contributing labor. Value of contributing labor included in cost and computed according to prevailing wage rate.





ITEM	Cost	% of Total Cost	$Cost \ Per Sq. Ft.$	$Cost$ $Per\ Cu.\ Ft.$	
STRUCTURE	\$57,800.00	78.7	\$7.50	\$.58	
PLUMB., HEAT., VENT	12,900.00	17.5	1.67	.13	
ELECTRICAL	2,800.00	3.8	.37	.03	
TOTAL COST OF BUILDING	\$73,500.00	100.0	\$9.54	\$.74	

TOTAL VOLUME: 99,286 cu. ft.—FLOOR AREA: 8,960 sq. ft.—FLOOR HEIGHT: 10' 6". Date of construction, April to November, 1956.

Arnold Perreton & Associates, A.I.A., Architects - Concord, N. H.



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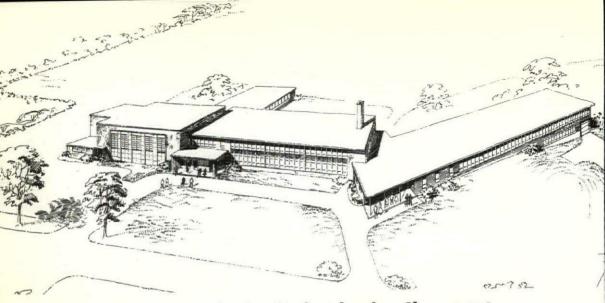
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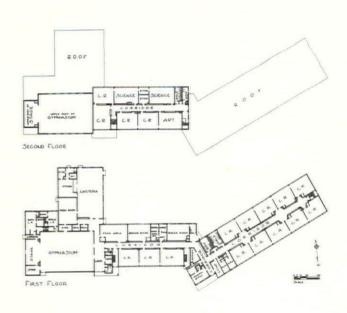


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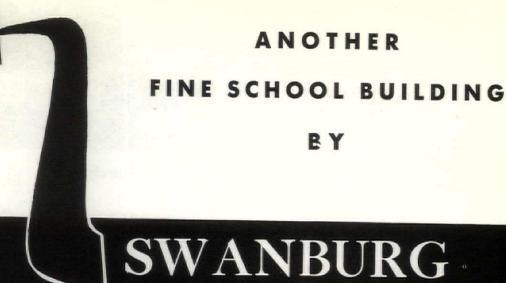


1TEM	Cost	% of Total Cost	$Cost \ PerSq.Ft.$	$Cost \ Per Cu. Ft.$
STRUCTURE	\$441,460.00	73.1	\$ 8.26	\$.50
PLUMB., HEAT., VENT	125,218.00	19.8	2.32	.14
ELECTRICAL	47,242.00	7.1	.80	.05
TOTAL COST OF BUILDING	\$613,920.00	100.0	\$11.38	\$.69

TOTAL VOLUME: 886,000 cu. ft.—FLOOR AREA: 53,930 sq. ft.—DATE OF BIDS: October, 1956—FLOOR HEIGHTS: 11' 5" floor to floor; 23' 0" to bottom of trusses in Gymnasium.

ALFRED T. GRANGER Associates, A. I. A. Architects and Engineers - Hanover, N. H.

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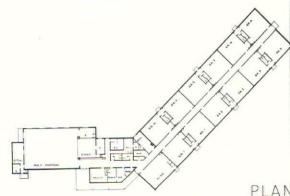


Elementary School - Gossler Park - Manchester

DESCRIPTION:

This is the last of three identical schools erected in the City of Manchester, N. H. Facilities provided are: 12 classrooms, kindergarten room, multi-purpose room, administrative offices, health unit, kitchen and locker rooms. Special features are the separate toilet facilities located between classrooms and the direct exiting to play areas from each classroom. Six additional classrooms have been planned for future construction. The multi-purpose room wing will also serve as a neighborhood community center, therefore, this wing is designed to serve its dual functions with a minimum of interference with the scholastic activities of the classroom wing. The school is fire-proof throughout and will have a four hour fire rating.

Construction data: reinforced concrete foundations, grade beams and floors, brick and cinder block exterior walls, cinder block interior partitions, asphalt tile floor finish, acoustical plaster



ceilings, concrete roof slab on steel joists, 2 year tar and gravel roof, aluminum ribbo windows and glass blocks, forced hot water her exhaust ventilation, fluorescent lighting in class rooms and incandescent lighting elsewhere.

ITEM	Cost	% of Total Cost	$Cost \ Per Sq. Ft.$	$Cost$ $Per\ Cu.\ Ft.$
STRUCTURE	\$226,418.00	78.9	\$ 8.95	\$.59
PLUMBING	18,222.00	6.3	.72	.05
HEATING & VENTILATING	23,030.00	8.0	.91	.06
ELECTRICAL	19,500.00	6.8	.77	.05
TOTAL COST OF BUILDING	\$287,170.00	100.0	\$11.35	\$.75

NOTE: Due to poor soil conditions all foundations and floors were designed in reinforced concrete and are supported solely on concrete piles. The cost of this additional foundation and floor work is included in the above Structure Cost as it could not be accurately separated. However, the cost of the pile work is listed separately.

CONCRETE PILE WORK \$22,650.00.

AREA: 25,294 sq. ft.—VOLUME: 378,795 cu. ft.—HEIGHTS: Classrooms 11' 10½", Multi-purpose Room 17' 0", Office 10' 0"—DATE OF BIDS: October 17, 1955.

Dirsa & Lampron, A.I.A., Chief Architects - Manchester, N. H. John D. Betley, A.I.A., Associate Architect - Manchester, N. H.

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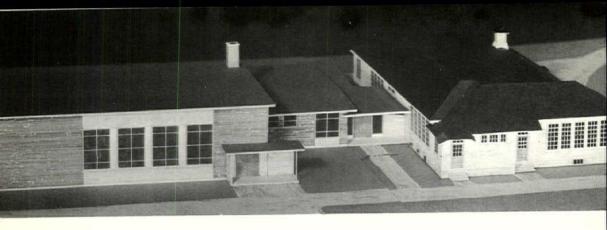
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Dial NA 3-2273

MANCHESTER, N. H.

General Contractor

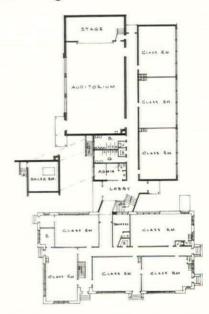
Gossler School - Manchester, N. H. Hampton Elementary School, Hampton, N. H.



Alterations and Additions to Greenland Grade School Building — Greenland

CONSTRUCTION:

Exterior walls—concrete block with brick facing and concrete block exposed, waterproofed; interior walls—concrete block painted; ceilings—acoustical tile in classrooms, corridors, lobby, etc. No finish ceiling in auditorium. Roof—20 year bonded tar and gravel, rigid insulation, roof boarding on 2" x 14" rafters for classrooms, etc. Metal deck on long-span joists for auditorium. Floors—concrete slab with asphalt tile; windows—wood sash, fixed and awning type; toilet stalls—metal; doors—wood with wood frames; heating—forced hot water, fin type radiation, classrooms and auditorium separately zoned; plumbing—standard grade school size fixtures; electrical—flourescent fixtures.



ITEM	Cost	% of Total Cost	Cost $Per Sq. Ft.$	Cost Per Cu. Ft.
STRUCTURE	\$ 75,014.00	79.4	\$ 8.50	\$.52
PLUMB., HEAT., VENT	14,000.00	14.8	1.61	.09
ELECTRICAL	5,399.00	5.8	.75	.02
COST OF ADDITION	\$ 94,413.00	100.0	\$10.86	\$.63
COST OF REMODELING EXISTING BUILDING	\$ 12,500.00			

TOTAL COST OF BUILDING...... \$106,913.00

TOTAL VOLUME: 149,380 cu. ft.—FLOOR AREA: 8,690 sq. ft.—DATE OF BIDS: May, 1956—FLOOR HEIGHTS: 10' 10" Classrooms; 18' 0" clear in Auditorium.

Edward Benton Miles, A.I.A., Architect - Exeter, N. H.

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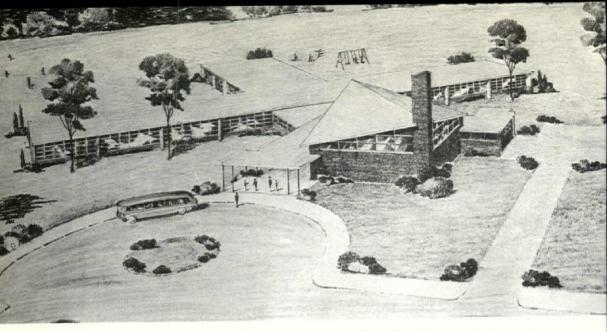
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FOR

GREENLAND SCHOOL



Hampton Elementary School - Hampton

Cost Data

Cost per sq. ft. \$ 12.27

Features:

- 1. Corridor-less classroom wings.
- Separate toilet rooms for each pair of classrooms.
- 3. Bi-lateral lighting in classrooms.
- Separate rooms for Assembly, for Cafeteria, for Adult Toilet Rooms.
- 5. School library.
- Varying sizes of classrooms reflecting differences in age groups.

Structure & Materials

Foundations: Concrete.

Walls: Brick with concrete block backers.

Wainscots: Salt glazed tile.

Roof: Steel panels, insulation, 20-year tar and

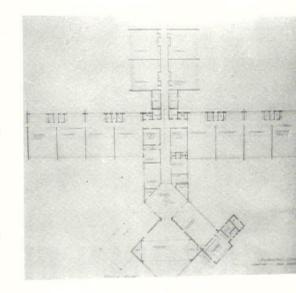
gravel roofing.

Windows: Aluminum awning.

Floors: Concrete slabs with asphalt tile.

Assembly Room: Laminated wood bents and

purlins, Tectum deck.



Ceilings: Acoustical strips installed in trough

of steel panels.

Heating: Forced hot water system with un

ventilator in each classroom.

Electric: Fluorescent fixtures installed i

troughs of steel panels.

Plumbing: 60 plumbing fixtures.

Tracy and Hildreth, A.I.A., Architects - Nashua, N. H.

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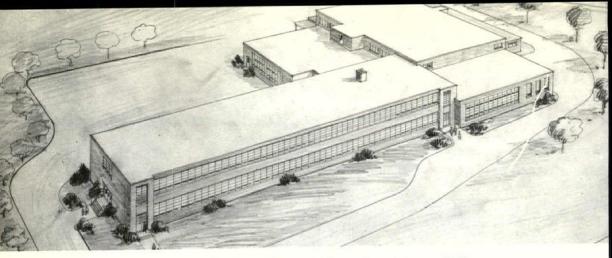
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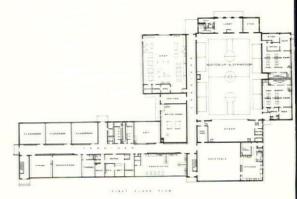
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Interlakes High School - Meredith

DESCRIPTION:

Foundations: Reinforced concrete. Outside Walls: In general sandstruck brick with cinder block Classroom spandrel walls colored pressed backup. Classroom spandrel walls colored pressed brick. Frame: Structural steel and bar joist frame throughout with steel centering and steel roof deck. Ground floor slab on grade. Roof: 20-year bonded built-up roof with 11/2" rigid Interior Partitions: Cinder insulation. painted with facing tile in showers and locker rooms. Floors: Classrooms, corridors, offices, etc. asphalt tile on concrete slab. Toilets, locker rooms, etc. concrete waterproof finish. Auditorium gymnasium hard wood floor on screeds over concrete slab. Ceilings: Classrooms, corover concrete slab. ridors, offices, etc. acoustical tile on metal suspension. Locker rooms, toilets, boiler room, porches, etc. plastered. Electrical: Incandescent fixtures throughout except fluorescent in shop. Local fire alarm system, program clock system, empty conduit sound system. Plumbing: Complete sanitary and rain water drainage systems with septic tank and disposal field and dry wells. All plumbing fixtures and recirculating hot water system. Pressure tank system for water supply



to be connected to driven well. Heating and Ventilating: Two cast iron boilers, low pressure steam automatic #6 oil firing. Pneumatic individual temperature controls throughout. Auditorium, cafeteria and locker rooms have unit ventilators. Unit heaters in corridors and shop All other areas direct radiation fin pipe and convectors. All piping insulated. Mechanica ventilators throughout.

ITEM	Cost	% of Total Cost	Cost $Per Sq. Ft.$	$Cost \ Per Cu. Ft.$
GENERAL CONTRACT	\$343,043.00	68.7	\$ 7.23	\$.49
PLUMBING & HEATING	115,990.00	23.2	2.45	.166
ELECTRICAL	40,500.00	8.1	.85	.058
		-		
TOTAL COST OF BUILDING	\$499 533 00	100.0	\$10.53	\$.714

TOTAL VOLUME: 699,512 cu. ft.—TOTAL AREA: 47,459 sq. ft.—DATE OF BIDS: April 2, 1956.

The above cost includes all normal building trades, hardware, lighting fixtures, casework, septic tank and disposal field, electric service, rainwater drainage, site and highway drainage, rough grading and rough preparation of roads and parking areas.

The above cost does not include finish grading, seeding, road and parking area surfacing, driven well, gymnasium folding partition, bleachers, lockers, laboratory tables, or other moveable equipment.

Hudson & Ingram, A.I.A., Architects & Engineers - Hanover, N. H.

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Addition To St. John's School - Laconia, N. H.

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"Costs and Trends System"

By the following method used in the "Costs and Trends System," developed by F. W. Dodge Corporation, volumes and area were determined for the projects included in this issue of the New Hampshire Architect.

AREA — The area of each floor (including unfinished basement but excluding partially excavated areas, crawl spaces, etc.) is taken from exterior face of wall to exterior face of wall. All covered areas such as walkways, porches, etc., are taken as 1/2 area while overhangs are taken as 1/3 area.

CUBAGE — Height is measured (on a flat roof building) from the underside of the lowest slab in contact with the ground to the top of the roof deck. On pitchedroof buildings the same method is fol-

lowed except that the highest point is at midway between roof ridge and wall plate or heel of the truss. Chimneys, dormers and similar projections are ignored. Unless parapet walls exceed 4 feet in height above roof deck and foundation walls exceed 3 feet in depth below lowest floor slab they are ignored. Where they exceed these figures the actual cube of the additional wall is added to total cubage. Garages and unfinished basements are taken as full cube while all covered areas such as walkways, porches, etc., are taken as 1/2 cube.

COST — Excluded from above, and listed separately if given, ade all architectural and engineering fees, cost of land paving, walks, landscaping, caissons, piling and other special foundation costs movable furnishings and equipment.

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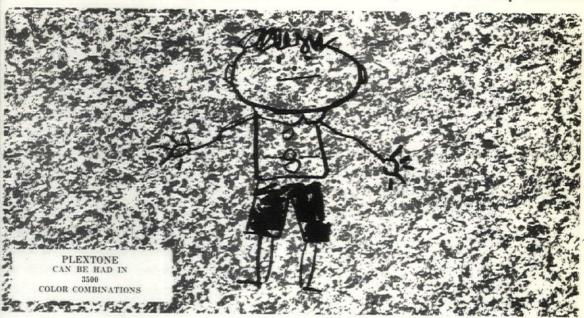
— for —

Addition To

St. John's School — Laconia, N. H Meredith Co-op School, Meredith, N. H IN SCHOOLS, THEY CALL IT

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NEW RECORD IN CONSTRUCTION CONTRACTS FOR 1957 IS FORECAST

NEW YORK — Dollar volume of construction contract awards in 1957 will set a new record 7 percent above this year's total, according to estimates released by F. W. Dodge Corporation, construction news and marketing specialists.

In its annual outlook for the construction industry, the Dodge organization said that physical volume of construction would not rise as rapidly as the dollar volume, because of rising construction costs.

Contracts for total building in the 37 eastern states next year are estimated at \$20,393,000,000, the highest in history and 6 percent above the estimate for 1956. Physical volume, as measured by floor area, may be up only one percent, but again this will be the highest level in history, according to the statement.

Contracts for total construction, which includes heavy engineering as well as residential and non-residential building, are estimated at \$26,783,000,000, or 7 percent above the 1956 total. No comparable floor area figure is reported, since floor area is not a measure for such major engineering projects as highways and dams.

The residential outlook is for a small increase in the number of new non-farm dwelling units started, to about 1,125,000 units, according to the outlook statement. This would be reflected in a six percent increase in dollar volume, due to rising costs, and no increase in total floor area, because of the likelihood of a slightly smaller average house next year.

The outlook statement, prepared by Dodge vice chairman Thomas S. Holden in collaboration with other Dodge staff members, says that "In 1957 there may be some relaxation of financial brakes, but financial authorities will again be alert to the possibility of runaway trends; there will likely be further expansion progress, with moderately increased construction volume, but no rapid overall acceleration. The estimates in the tables assume a nominal increase in physical volume of building with a somewhat larger percentage increase in dollar volume of building contracts, the latter based on an expectation of rising construction costs. heavy engineering projects substantial increases in physical volume also accompanied by rising costs are anticipated in the indicated overall rise of 10 percent over 1956 levels.

"In the general group under the nonresidential building heading, moderate declines in physical volume of commercial buildings and manufacturing buildings are estimated. Both of these classes of building operations ran to very high totals in 1955 and 1956; their dollar totals may very well increase a little in 1957.

"Hospitals and institutions are expected to run about as in 1956, as far as physical volume is concerned. The other non-residential building classifications (educational and science buildings, public buildings, religious buildings, social and recreational projects, and miscellaneous non-residential buildings) are expected to show moderate increases.

TABLE 1: ESTIMATED DOLLAR VOLUMES OF BUILDING AND ENGINEERING PROJECTS

(in accordance with contract records for 37 eastern states; figures in millions of dollars)

CLASSIFICATION	YEAR 1956 ESTIMATE *	YEAR 1957 ESTIMATE	PERCENTAGE CHANGE +
TOTAL PRIVATE AND PUBLIC OWNERSHIP			
Nonresidential	9075	9576	+ 6
Residential	10205	10817	+ 6
Total Building	19280	20393	+ 6
Public Works and Utilities	5809	6390	+10
Total Construction	25089	26783	+ 7
PRIVATE OWNERSHIP	17061	17945	+ 5
PUBLIC OWNERSHIP	8028	8838	+ 10

TABLE 2: ESTIMATED PHYSICAL VOLUME OF BUILDING

(in accordance with contract records for 37 eastern states; figures in millions of sq ft)

BUILDING CLASSIFICATION	YEAR 1956 ESTIMATE *	YEAR 1957 ESTIMATE	PERCENTAGE CHANGE +
Commercial	167	160	- 4
Manufacturing	148	145	- 2
Educational and Science	157	165	+ 5
Hospitals and Institutions	25	25	+ 0
Public	19	20	+ 5
Religious	40	44	+ 10
Social and Recreational	22	24	+ 9
Miscellaneous Nonresidential	61	65	+ 7
Total Nonresidential	639	648	+ 1
Residential	986	986	+ 0
Total Building	1625	1634	+ 1
New Non-farm Dwelling Unit			
Starts (BLS Basis)	1,100,000	1,125,000	+ 2

^{*}Nine months actual, last three months estimated.

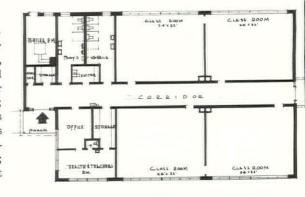
[†]Percentages rounded to nearest whole number



New Boston Elementary School - New Boston

DESCRIPTION:

Footings and foundation walls reinforced concrete; exterior walls brick veneer with cinder block backup, load bearing walls; roof framing, open web steel joist with precast roofdeck and 20 year bonded roof; floor concrete slab, cover asphalt tile; interior partitions cinder block; ceiling, acoustical plaster; interior door frames steel; windows aluminum; lighting, classrooms fluorescent fixtures, remainder of building incandescent; heating two zone circulating hot water; ventilation, mechanical classrooms and toilet rooms.





ITEM	Cost	% of Total Cost	Cost $Per Sq. Ft.$	Cost Per Cu. Ft.
STRUCTURE	\$44,775.00	76.5	\$ 7.74	\$.605
PLUMB., HEAT., VENT	10,800.00	18.4	1.86	.145
ELECTRICAL	3,000.00	5.1	.52	.04
TOTAL COST OF BUILDING	\$58,575.00	100.0	\$10.12	\$.79

TOTAL VOLUME: 74,571 cu. ft.—FLOOR AREA: 5,782 sq. ft.—DATE OF BID: September, 1955.

Alexander J. Majeski, A.I.A., Architect - Bedford, N. H.

SPRAGUE BROS., INC., NASHUA, N. H. GENERAL CONTRACTORS

FRANCIS P. CONNOR & SON, INC.

Plastering Contractor

FOR

New Boston Elementary School

NEW BOSTON, N. H.

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2 Sheridan St. Tel. TU 2-3791 NASHUA, N. H.

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GENERAL CONTRACTOR

NEW BOSTON ELEMENTARY SCHOOL

SPRAGUE BROTHERS, Inc.

30 CHARLOTTE AVE. TUxedo 2-2602 NASHUA, N. H.



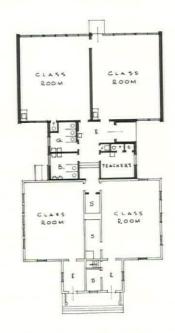
Alterations and Additions to Newfields Grade School Building — Newfields

CONSTRUCTION:

Exterior walls—concrete block with brick facing; interior walls—concrete block painted; ceilings—acoustical tile; floors—concrete slab with asphalt tile, ceramic tile in toilet rooms; roof—20 year bonded tar and gravel roof covering, rigid insulation, roof boarding on 2" x 14" rafters; windows—wood sash, fixed and awning type; toilet stalls—metal; doors—wood with wood frames; heating—forced hot water, fin type radiation, individual room controls, new heating system for entire building; plumbing—standard grade school size fixtures; electrical—fluorescent fixtures.

Cost of constructing a boiler room around the boiler in existing building is included in this contract.

TOTAL COST OF BUILDING.....



STRUCTUREPLUMB., HEAT., VENTELECTRICAL	**Cost \$24,641.00 5,769.00 2,868.00	% of Total Cost 74.1 17.3 8.6	Cost Per Sq. Ft. \$ 9.19 2.14 1.06	Cost Per Cu. Ft. \$.64 .15 .06
COST OF ADDITION	\$33,278.00	100.0	\$12.39	\$.85
COST OF HEATING FOR EXISTING BUILDING	\$ 3,000.00			

TOTAL VOLUME: 38,685 cu. ft.—FLOOR AREA: 2,690 sq. ft.—DATE OF BIDS: May, 1956—FLOOR HEIGHTS: 10' 2".

\$36,278.00

Edward Benton Miles, A.I.A., Architect - Exeter, N. H.

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Newton **Elementary School**

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School Building Problem —

(Continued from Page 8)

moving. The tops to be left in maple or covered with a more durable material. Whether they are to be equipped with doors or slides is optional with the school district.

- c. The wardrobes for the elementary school are extremely controversial. This matter should be left up to the local committee and school authorities. The following methods now seem to be acceptable.
 - Steel lockers set into recesses in the corridor walls.
 - Make-shift coat racks built along corridor walls with or without a low seat for children to use in putting on rubbers and overshoes.
- 3. Built-in classroom wardrobes either with or without doors. These units give excellent teacher control but are usually expensive.
 - 4. Movable wardrobes small enough to be portable but sufficiently stable so that they will not be easily tipped over. Units of this type are on the market with space for the wraps of 15 pupils. Thus, two units would be sufficient for the primary grades. A larger unit is available for the older children. Each type is provided with a tack board area or chalk board on the closed-in side. By placing these units a few feet from the wall it is possible to screen off unsightly wraps and have more working area for pupils.
- d. Tables and library carts for books and magazines are needed in all the rooms. The book truck with large casters can easily be moved from room to room. This too, serves as a work counter when needed.
- e. Lets not forget the teacher and her needs. A desk-high file and low book case add materially to her comfort and efficiency. A full-length mirror on one wall may be used as a teaching aid and helps pupils to take pride in their posture and appearance.
- f. Other features—the lighting of corridors is always a problem. The plastic "bubble," sky lights, clerestory lighting and borrowed light all have their sup-

porters. We feel that large window areas between the classroom and corridor serve a number of purposes.

- They are a safe and usually economical source of borrowed light.
- 2. Gives the building and corridor an "openness" so important in any school.
- 3. Serves as an excellent display area for pupils' work. The Thangsgiving story may be depicted here and removed in time for the Christmas decorations.
- 4. Permits visitors and the principal to see what is taking place in the classroom without disturbing the class. Both pupils and teacher get accustomed to this feature and do not mind the corridor activity.

In conclusion, I would like to indicate my appreciation of the many contributions made by New Hampshire architects toward the construction of school buildings in our state. It is only through close cooperation between school boards, teachers, and the local administrator that we can expect a plant that will be acceptable. We in the State Department feel that we also have a contribution to make. Our suggestions are primarily made during the preliminary planning stage. We realize full well the expense of doing over plans, consequently we constantly urge school boards and architects to submit their sketches early so that changes may be made during the initial stages of the planning process.



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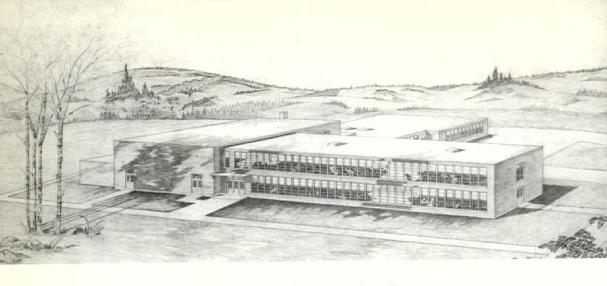
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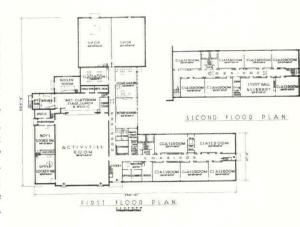
1266 BOYISTON STREET . BOSTON



Newport Junior High School - Newport

DESCRIPTION:

Foundations; Reinforced Concrete; Structural Frame; Structural Floors; Reinforcing Concrete; Floor and Roof Joists; Steel; Roof Decking; Pre-Cast Insulating Concrete Slabs and Wood; Twenty-year Bonded Roofing; Brick Exterior Wall Facing with Cinder Tile Backing; Cinder Tile Interior Partitions; Asphalt Tile Floors, Classroom Sections; Gymnasium Floors, Rock Maple; Acoustical Tile Ceilings; Steel Interior Door Frames; Aluminum Sash; Interior and Exterior Doors, Wood; Modern Paint Decorations; Complete Modern Electrical; Five (5) Zone Forced Hot Water System; Forced Ventilation. Fifty Six (56) Plumbing Fixtures.



ITEM	Cost	% of Total Cost	Cost $Per Sq. Ft.$	$Cost$ $Per\ Cu.\ Ft.$
STRUCTURE	\$263,391.00	77.1	\$6.82	\$0.530
PLUMBING	22,000.00	6.5	.57	.044
HEATING & VENTILATING	32,570.00	9.5	.84	.65
ELECTRICAL	23,390.00	6.9	.60	.048
TOTAL COST OF BUILDING	\$341,351.00	100.0	\$8.83	\$.687

TOTAL VOLUME: 497,275 cu. ft.—TOTAL FLOOR AREA: 38,550 sq. ft.—CEILINGS HEIGHTS: 1st Floor 10'; 2nd Floor 10'; Gymnasium 20'.

Irving W. Hersey Associates, A.I.A., Architects - Durham, N. H.

DONALD D. SNYDER and SON, INC., GARDNER, MASS.
GENERAL CONTRACTORS

AL MELANSON Company, Inc.

Roofing Contractors

for

Newport

Junior High School

NEWPORT, N. H.

Roofing

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R. L. GALLOWAY Walpole, N. H.

SKyline 6-3783

Plumbing - Heating - Ventilating

Newport Junior High School

Heating and Ventilating

WALPOLE ELEMENTARY SCHOOL

GENERAL CONTRACTOR NEWPORT JUNIOR HIGH SCHOOL NEWPORT, N. H.

DONALD D. SNYDER & SON, INC.

49 Chelsea Street
GARDNER, MASSACHUSETTS

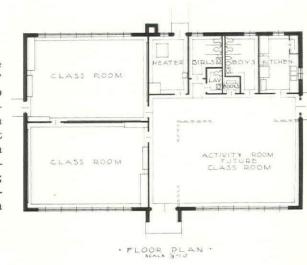
PHONE 2512



Newton Elementary School — Newton

DESCRIPTION:

Footings—concrete; foundation walls—concrete block; exterior walls—4" water struck brick, 8" cinder block back-up tile; floor—4" concrete slab on fill asphalt tile topping; interior partitions—4" cinder block; roof frame—wood trusses on 2'-0" centers; roof covering—heavy butt asphalt shingles; doors—flush type birch veneer set in steel frames; windows—steel sash; ceilings—acoustical tile; stainless steel sink in kitchen; heating—forced hot water; lighting—incandescent fixtures; plumbing fixtures—American Standard.



AREA OF BUILDING	3,460 sq. ft	
CUBE	50,750	
Cost including accessories and		
architect's commission	\$45,400.00	
COST PER SQ. FT.	\$	13.12
COST PER CU. FT	\$.89
COST PER PUPIL	\$	432.35

Roland S. Simonds, A.I.A., Architect - Manchester, N. H.

E. W. & P. B. CURRIER, AMESBURY, MASS.
GENERAL CONTRACTORS

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482 Reservoir Ave. Dial NA 5-5640

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PAINTING CONTRACTOR

NEWTON Elementary School

NEWTON, N. H.

E. W. & P. B. CURRIER

Amesbury, Mass.

TEL. 411-M

We Were

General Contractors

Newton Elementary — Newton, N. H.
Sandown Elementary — Sandown, N. H.

Kensington Elementary - Kensington, N. H.

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GOFFSTOWN, N. H. HYacinth 7-2376

"Interpretation of Specerfication"

Although we can assure our readers that none of the TSA members are going to draw up any such "specerfications", we thought you would like to share with us this delightful bit of foolery. The author is Lou Aichel, toastmaster at a recent banquet of the Florida Association of Architects:

The plans and specerfications are to be taken tergether. Anything shown on the plans and not mentioned in the specerfications and not shown on the plans is to be considered as both shown and specified, and anything wanted by the arketekt or any of his friends or by anybody else, (except the contrakter) shall be considered as shown, specerfied, implied and required, and shall be pervided by the contrackter without no expense to nobody but hisself.

If the work has been done without no expense to the contrackter, the work shall be taken down and done over again and again until the expense is satisfactory to the arcketekt.

Anything that is right on the plans is to be considered right. Anything that is wrong shall be discovered by the contrackter and shall be made right without a-telling the arckitekt or indercating it on the bills.

Anything that is forgotten or left out of the plans or the spercerficaions but which is necessary for the convenyance of the owner shall be pervided without extry cost to nobody but the contracketer. The arckitekt reserves the right to change his mind about what is best.

Any evidence of satisfaction on the part of the contrakter shall be considered as just cause for witholding final payment.

Texas Architect, October, 1956

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american Chain Link Fences

RAYMOND, N. H.

October 30, 1956

Peter J. Agrafiotis and Associates Advertising and Public Relations Hotel Carpenter Manchester, New Hampsnire

Dear Peter:

Please prepare and place an advertisement for us in the School Issue of NEW HAMPSHIRE ARCHITECT.

In this ad, be sure to express our sincere thanks and appreciation to the scores of school districts and departments for business they placed with us.

I wish space permitted to list all the fine schools throughout New Hampshire and New England where we installed fences. Here are a few you might mention:

Lyndeboro School, Wilton
New Ipswich School, New Ipswich
Sherburne School, Portsmouth
University of New Hampshire
Keene State Teachers College
Exeter Academy, Exeter
Elementary Schools, Milford
Elementary Schools, Meredith
Supervisory Union #49, Wolfeboro
Searles School, Windham
Manchester School District
Peterborough School District

As I say, we have been privileged to do the fencing for many schools in the years past. It would take too much space to list them all.

You might also mention that we are always pleased to offer ree estimates, and include a notation that school officials may obtain our catalogue simply by dropping us a note.

Sincerely,

Frank J. Mafera, Jr., President New Hampshire Fence Company

Advertising Agency Note: The above letter tells the story. What more need be said?



North Conway Elementary School

DESCRIPTION:

Reinforced Concrete Foundations, Reinforced Dampproof Concrete Floor Slabs, Structural Steel Frame, Precast Concrete Insulating Roof Decking, Twenty Year Bonded Roof. Lead Coated Copper Flashings, Aluminum Sash, Brick Facing with Cinder Tile Backing, Cinder Tile Interior Partitions, Acoustical Tile, Plastered and Structural Ceilings, Large Glazed Areas in Corridor, Large Display Cases in Lobby, Ceramic Tile Floors, Asphalt Tile finished Floors, Wood Stage Floor. Stainless Steel Kitchen Equipment, Steel Interior Door Frames. Modern Pain Decorations, Program Plumbing System Thirty Six (36) Fixtures, Five (5) Zone Forced Hot Water Heating System, Forced Ventilation.



ITEM	Cost	% of Total Cost	Cost $PerSq.Ft.$	Cost Per Cu. Ft.
STRUCTURE	\$181,918.24	79.8	\$ 8.66	\$.432
PLUMBING	34,941.00	15.2	1.65	.083
HEATING & VENTILATING	11,743.90	5.0	.55	.028
TOTAL COST OF BUILDING	\$228,603.14	100.0	\$10.86	\$.543

TOTAL VOLUME: 420,350 cu. ft.—TOTAL FLOOR AREA: 21,064 sq. ft.—FLOOR HEIGHTS: Class Room Section 10' 0"; Activity Room 18' 0".

Irving W. Hersey Associates, A.I.A., Architects - Durham, N. H.

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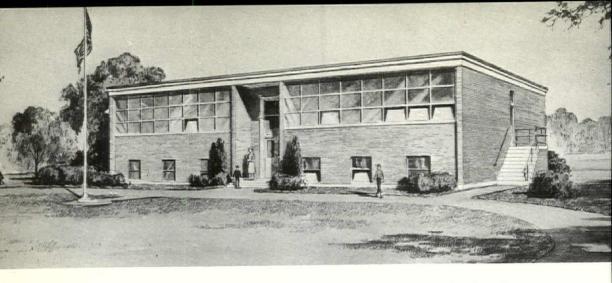
CONSOLIDATED GRADE SCHOOL HOOD MEMORIAL JUNIOR HIGH SCHOOL DERRY TOWN GRADE SCHOOL ADDITION TO YORK HIGH SCHOOL CONWAY ELEMENTARY SCHOOL MOULTONBORO, N. H.

DERRY, N. H.

DERRY, N. H.

YORK, MAINE

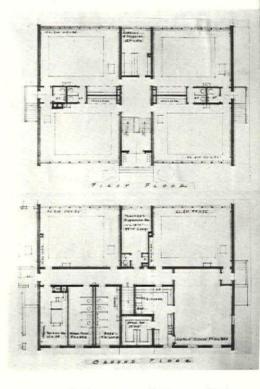
CONWAY, N. H.



Elementary School for Rumney School District

DESCRIPTION:

Six class rooms, lunch room, kitchen, teachers room, library, etc.; Structure-concrete footings, concrete foundation walls to grade; concrete block exterior walls with Quickbrick facing; 8" and 4" cinder block partitions; ground floor-waterproof concrete on grade; first floorsteel bar joists, steel tex, and 21/2" concrete slab; roof-steel bar joists, steel tex, and 3" vermiculite concrete slab; tar and gravel roofing; acoustical plaster ceilings; metal stairs, metal toilet partitions, metal door frames with solid birch doors; wood and glass window wall; painted block and trim interior; asbestos chalkboard; asphalt tile floor; plumbing-11 water closets, 4 urinals, 7 lavatories, 6 class room sinks, 2 drinking fountains, standard supply and septic tank with drain field; heating-oil, forced hot water, fin tube radiation, two zone system; ventilation-forced exhaust at floor and fresh intake at windows; electrical-rigid conduit concealed and exposed, flourescent fixtures.



ITEM	Cost	% of Total Cost	$Cost \ Per Sq. Ft.$	$Cost$ $Per\ Cu.\ Ft.$
STRUCTURE	\$71,896.00	80	\$ 8.00	\$.64
PLUMB., HEAT., VENT	14,473.00	16	1.63	.13
ELECTRICAL	3,300.00	4	.37	.03
TOTAL COST OF BUILDING	\$89,669.00	100	\$10.00	\$.80

TOTAL VOLUME: 112,000 cu. ft.—FLOOR AREA: 8,960 sq. ft.—FLOOR HEIGHT: 10' 6"—DATE OF BID: February 17, 1956.

Arnold Perreton & Associates, A.I.A., Architects - Concord, N. H.

HILLSBORO CONSTRUCTION COMPANY, MANCHESTER, N. H. GENERAL CONTRACTORS

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and

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HILLSBORO CONSTRUCTION Company

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Manchester, N. H.

General Contractor

RUMNEY ELEMENTARY SCHOOL Rumney, N. H.

Three Outstanding Works Of Ours Are: Sewerage Disposal and Treatment Plants at Aerial Tramway - Franconia Notch, N. H. Vermont State Hospital - Waterbury, Vt. Proctor Academy - Andover, N. H.

Upon Completion.... RUMNEY ELEMENTARY SCHOOL will be Faced with



The Amazina NEW Brick Finish Beautiful Real Brick Exteriors that Last the Life of a Building

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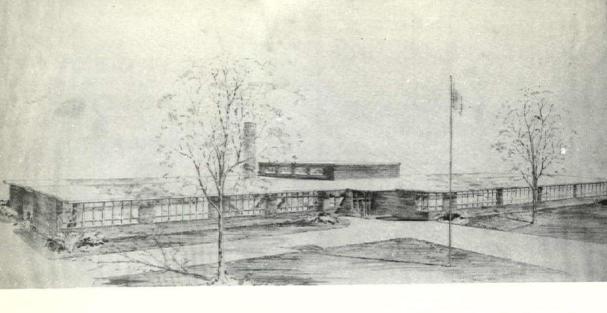
Manchester, N. H.

Plastering Contractors for

Rumney Elementary School

Gossler Park School - Manchester

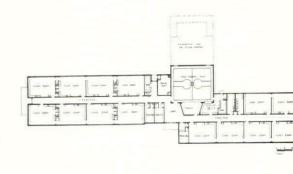
Meredith High School



Rye Elementary School - Rye

CONSTRUCTION:

EXTERIOR WALLS: Concrete block faced with brick. INTERIOR WALLS: Concrete block painted. Ceramic tile dado in toilets. CEILINGS: Acoustical units, asbestos board in Boiler Room. ROOF: 20 yr. bonded tar and gravel, 1" insulation, roof boarding on 2 x 14" Douglas fir rafters, for classroom portion. 20 yr. bonded tar and gravel, 3" planking, 3" nailer supported by steel longspans over Multi-Purpose Room. FLOORS: Reinforced concrete slab on grade with asphalt tile flooring, plastic tile in Kitchen, ceramic tile in toilets. WINDOWS: Structural wood, classroom portion. Steel sash in Multi-Purpose Room. HEATING: Two pipe forced hot water system. PLUMBING: Standard Grade School size. ELEC-TRICAL FIXTURES: Incandescent.



ITEM	Cost	% of Total Cost	Cost $Per Sq. Ft.$	Cost Per Cu. Ft.
STRUCTURE	\$190,581.00	74.9	\$ 7.71	\$.45
PLUMB., HEAT., VENT.	37,417.00	20.0	2.06	.12
ELECTRICAL	11,017.00	5.1	.53	.03
W.				-
TOTAL COST OF BUILDING	\$239,015.00	100.0	\$10.30	\$.60

TOTAL VOLUME: 396,140 cu. ft.—FLOOR AREA: 23,196 sq. ft.—DATE OF BIDS: October, 1955—FLOOR HEIGHTS: 10' 8" to 11' 8", 19' 0" to bottom of trusses in Multi-Purpose Room.

ALFRED T. GRANGER Associates, A.I.A. Architects and Engineers - Hanover, N. H.

SWANBURG CONSTRUCTION CORP., MANCHESTER, N. H. GENERAL CONTRACTOR

Painting Contractor

Rye Elementary School

RYE, N. H.





FRANCOEUR - GILL CO., INC.

Plumbing Heating Contractors

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SEABROOK ELEMENTARY SCHOOL - SEABROOK, N. H. ADDITION PENACOOK HIGH SCHOOL - PENACOOK, N. H.

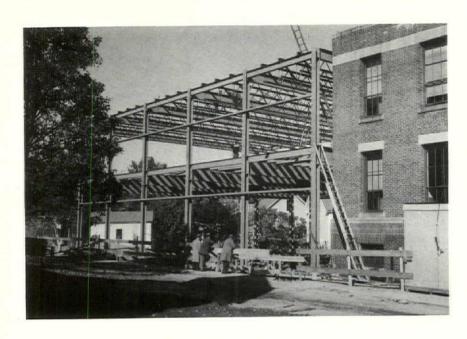
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241 UNION AVE.

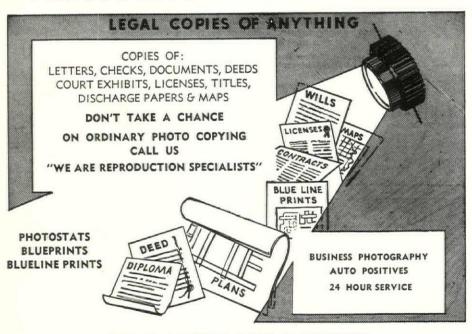
LACONIA, N. H.

TELEPHONE 1090



Sidewalk Superintendents Help in Construction of St. John's School at Laconia

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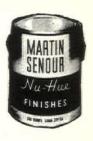
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405 No. Main Street MANCHESTER, N. H.

ARCHITECTURAL SHEET METAL WORK
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The Color Coordinator System

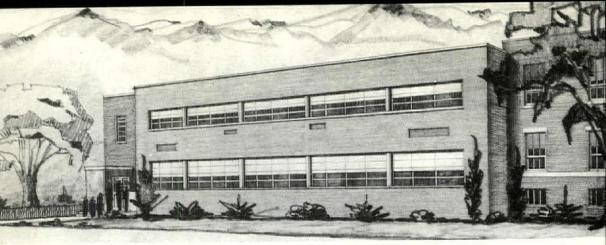
The Color Coordinator System is a positive system of color selection, specification and duplication in Paints. It consists of 497 colors, selected to provide maximum coverage of util color possibilities. This vast array of colors is arranged in handy chart form for quick matching, selection and creation of color harmonies. It is also available in actually painted 3" x 5" removable samples. Martin-Senour maintains a library of these color samples. Orders for individual color samples are promptly handled.

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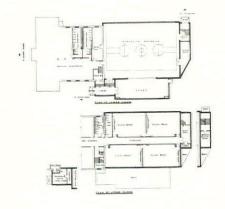


Addition to St. John School for St. Joseph Parish - Laconia

DESCRIPTION:

Because of site conditions a two story structure including a gymnasium with classrooms above was selected. Work in the existing building included a new oil fired boiler, an incinerator, remodeling the former coal storage to provide locker and shower rooms; and furnishing individual heating controls in each existing classroom.

Concrete foundations; steel frame; ground floor concrete; first floor concrete poured on light weight acoustical and sound deadening precast slab which forms ceiling of gymnasium; roof precast insulating slab; tar and gravel roofing; extruded aluminum coping; steel stairs; exterior walls face brick and painted cinder concrete block; interior partitions painted cinder concrete block; flooring asphalt tile except ceramic tile in locker rooms, shower rooms, toilets, and wood on stage; tile dado in showers; safety cushion dado on walls of gymnasium; in gymnasium one long court and two cross courts; floor sleevs for net supports; steel sash; metal doors and frames; acoustical tile ceilings in corridor and classrooms; drinking fountain and lavatory with hot and cold water in each classroom; cloth window shades; metal toilet partitions; chair and table



storage under stage; stage to be used for special classes; activity bench with shelves under and two movable wardrobe units in each classroom; heading by steam; unit ventilators, finned type radiation, and mechanical exhaust for gymnasium and classrooms; incandescent lighting in gymnasium and fluorescent lighting in classrooms new electric entrance for convent, school, church and rectory.

ITEM	Cost	% of Total Cost	$Cost \ Per Sq. Ft.$	Cost Per Cu. Ft.
STRUCTURE	\$117,990.00	69.2	\$ 9.13	\$.535
PLUMB., HEAT., VENT	43,597.00	25.6	3.38	.198
ELECTRICAL	8,975.00	5.2	.70	.041
		-		
TOTAL COST OF BUILDING	\$170,562.00	100.0	\$13.21	\$.774

Costs include work in existing building.

TOTAL VOLUME: 220,448 cu. ft.—FLOOR AREA: 12,914 sq. ft.—Volume and area do not include any in existing building—DATE OF BIDS: November 22, 1955.

Norman P. Randlett, A.I.A., Architect - Laconia, N. H.

ARMAND ROUX, INC., LACONIA, N. H. GENERAL CONTRACTOR

MILLWORK

for

Addition To

St. John's School

LACONIA, N. H.

by

BOULIA-GORRELL LUMBER CO.

176 Fair St.

Laconia, N. H.

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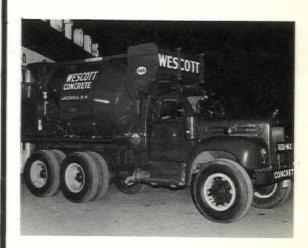
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Armand Roux Construction Co.

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LACONIA, N. H.

GENERAL CONTRACTOR

ADDITION TO

ST. JOHN'S ELEMENTARY SCHOOL

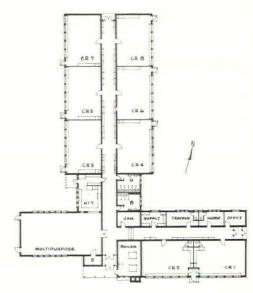
LACONIA, NEW HAMPSHIRE



Mount Caesar School - Swanzey Center

DESCRIPTION:

Concrete footings, concrete block walls below grade, cinder concrete blocks and roman brick veneer exterior walls; cinder concrete blocks painted interior walls; roof, wood joists sheathing and insulation with built up roofing; windows, glass block and wood sash; asphalt tile floors; tile wainscot in corridors and toilets and tile floors; acoustical tile ceilings; fluorescent lighting; two oil fired steam boilers with Herman-Nelson "Draft-Stop" unit ventilators for heating.



ITEM	Cost	% of Total Cost	Cost $PerSq.Ft.$	Cost Per Cu. Ft
STRUCTURE	\$102,231.00	67.1	\$ 7.25	\$.59
PLUMBING	9,238.00	6.0	.65	.052
HEATING & VENTILATING	30,611.00	20.1	2.13	.17
ELECTRICAL	9,960.00	6.8	.70	.058
TOTAL COST OF BUILDING	\$152,040.00	100.0	\$10.73	\$.87

VOLUME: 174,630 cu. ft.—AREA: 14,160 sq. ft.—DATE OF BIDS: March, 1952.

John R. Holbrook, A.I.A., Architect - Keene, N. H.

J. J. VIETTE and SONS, KEENE, N. H. GENERAL CONTRACTOR

THE LOYAL APPLIANCE CO.

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BRATTLEBORO, VT.

Electrical Contractors

FOR

Swanzey **Elementary School**

SWANZEY, N. H.

Plumbing and Heating

— for —

SWANZEY ELEMENTARY SCHOOL Swanzey, N. H.

SYMONDS ELEMENTARY SCHOOL Keene. N. H.

RIVERS and HENRY

O. A. Rivers R. H. Henry

KEENE N. H.

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SWANZEY ELEMENTARY SCHOOL

Swanzey, N. H.

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Building Materials — Paints

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and on the
SYMONDS SCHOOL ADDITION
Keene, New Hampshire

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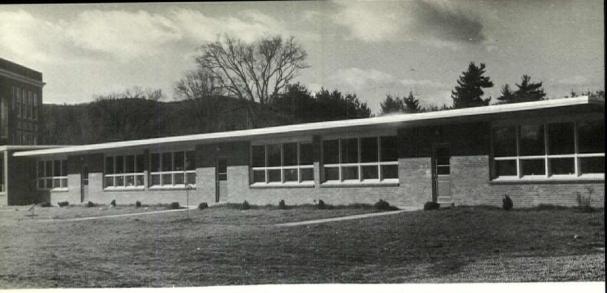
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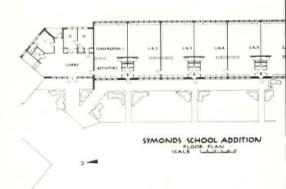


Addition to The Symonds School - Keene

DESCRIPTION:

A six classroom addition was required to relieve a crowded condition in the first three grades. The design of a corridorless addition with separate entrances for each two classrooms, each having their own toilet facilities, was considered to be the most economical use of the space required. A lobby with a teacher's room, principal office, nurse's room and janitor's storage area was made the connecting link between the new addition and the old school. The new boiler was installed in the existing boiler room.

Construction details: concrete footings, concrete block walls below grade, cinder concrete blocks and brick veneer on exterior walls; windows, glass block with wood sash and fixed wood sash with ventilating sash below; roof, wood joists insulated and built-up roofing; floors, vinyl asbestos; ceilings, acoustical tile; chalkboards, steel with aluminum trim; lighting, incandescent "Holophane Paradome" fixtures; heating, Herman-Nelson "Draft-Stop" unit ventilators, hot water, package unit, boiler.



ITEM	Cost	% of Total Cost	Cost $Per Sq. Ft.$	$Cost$ $Per\ Cu.\ Ft$
CONSTRUCTION	\$ 60,700.00	60.38	\$ 7.05	\$.546
HEATING	23,968.00	24.25	2.78	.215
PLUMBING	7,632.00	7.22	.89	.067
ELECTRICAL	8,200.00	8.25	.95	.073
TOTAL COST OF BUILDING	\$100,500.00	100.00	\$11.67	\$.901

VOLUME: 111,650 cu. ft.—AREA: 8,612 sq. ft.—DATE OF BIDS: March, 1956—COMPLETED: September 1, 1956.

John R. Holbrook, A.I.A., Architect - Keene, N. H.

R. E. BEAN CONSTRUCTION CO., INC., KEENE, N. H. GENERAL CONTRACTOR

ROOFING AT —

Symonds School, Keene, N. H. Franklin St. School, Franklin, N. H. Hinsdale School, Hinsdale, N. H.

Brattleboro Roofing and Sheet Metal Co., Inc.

40 Years Experience

154 Elliot St., Brattleboro, Vt.

BARRETT ROOFING IS OUR SPECIALTY

INDUSTRIAL COMMERCIAL RESIDENTIAL PLANNING BLUEPRINTING

Electrical Contractor

- for -

New Addition SYMONDS ELEMENTARY SCHOOL Keene, N. H.

PHILIP D. MORAN

Keene, N. H.

103 Winchester St.

Tel. 1224

HEATING VENTILATING MACHINE ERECTING MILLWRIGHT WORK

R. E. BEAN CONSTRUCTION CO., INC.

29 Island St. Keene, N. H.

GENERAL CONTRACTOR SYMONDS SCHOOL ADDITION

KEENE, N. H.

INDUSTRIAL — COMMERCIAL — RESIDENTIAL BUILDING



York Elementary School - York Village, Maine

TOTAL CONSTRUCTION COST: \$99,450.

AREA: 7136 sq. ft.

COST: \$13.92 @ sq. ft.

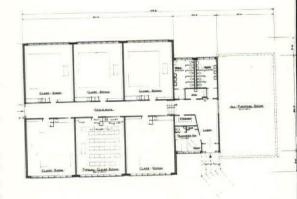
These figures include:

- (1) A new heating plant in the existing school with underground piping to the new building. Plant heats both schools.
- (2) A new and enlarged sewage disposal system handling both the old and new buildings.

This is a six-room school; asphalt tile on concrete slab; tar & gravel roof over wood frame; interior roof drains; cinder block walls with brick veneer; aluminum sash; flourescent fixtures; polished wire glass in entrance door, sidelights and transom.

I feel that the success of a job depends on the combined effort, understanding, and cooperation of the Building Committee, the Architect, and the Contractors. This we had in large measure. Rather than trying to put a contemporary addition onto the 70 year old building, we felt that the new rooms should be in a separate structure with better orientation, and with existing utilities extended to it.

To minimize cubage a "butterfly" roof was used. The classrooms are only 800 sq. ft., intentionally limiting the number of pupils per room to 25. The walls between classrooms were used for roof bearings, eliminating window and door lintels.



Deciding that a minimum of maintenance was worth a more than minimum original cost, the following features were incorporated:

Ceramic tile on toilet room floors, and on a window stools. Glazed tile dados in the coridor and toilet rooms. Cinder blocks we stacked to minimize shrinkage cracks. Acoust tile ceilings are finished with a plastic coatin All utilities are sized for the addition of an apurpose room.

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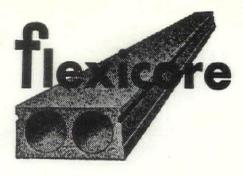
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g	N. H. Architect	Alexander J. Majeski
h	Travelling Exhibit	Nicholas Isaak
C—I	MEMBERSHIP ACTIVITIES	
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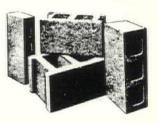
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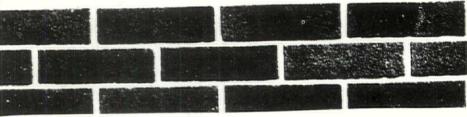
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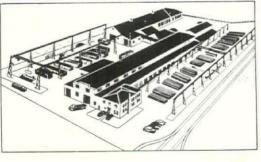
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